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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,319	03/22/2006	Kunihiko Nakamura	MAT-8706US	1559
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EXAMINER				
SUMMONS, BARBARA				
ART UNIT		PAPER NUMBER		
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MAIL DATE		DELIVERY MODE		
04/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,319

Applicant(s)

NAKAMURA, KUNIIHIKO

Examiner

BARBARA SUMMONS

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008 (election).
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) 1-5, 7-18 and 22-25 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 6 and 21 is/are rejected.
7) ☒ Claim(s) 19 and 20 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 13 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species II in the reply filed on 4/10/08 is acknowledged.
2. Claims 1-5, 7-18 and 22-25 are withdrawn from further consideration pursuant to 37 CFR § 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/10/08.

Drawings

3. Figures 3, 22 and 23 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (see e.g. the spec. at page 1, lines 12-13, page 11, lines 12-13 and page 14, lines 14-18). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 6 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Newell U.S. 3,634,787.

Regarding claim 6, Fig. 6 of Newell discloses a mechanical resonator comprising: a vibration body 50 operable to perform mechanical resonant vibration (see e.g. the last line of col. 7 and col. 7, lines 50-53); and an electrode 57 (see col. 7, lines 57-60 and col. 8, lines 2-3) located in the vicinity of the vibration body 50 and operable to vibrate in a resonance mode (i.e. the flexural mode) at a same resonant frequency as the vibration body as shown in Fig. 6 (see also Fig. 7), which is similar to the resonance of both the electrode and the vibration body shown in Applicant's Fig. 11B. Regarding claim 21, there is an insulation layer 56 that is a piezoelectric layer of cadmium sulfide between the electrode 57 and the vibration body 50.

Allowable Subject Matter

6. Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Niu et al. U.S. 6,624,726 is the patent that issued from the related published application cited by Applicant, and it shows two resonators 502 and 504 with associated electrodes 512 and 514 that vibrate at the same resonant frequency as the resonators because they are doped areas on and embedded in the resonators.

Ayazi et al. U.S. 6,909,221 discloses a mechanical resonator with piezoelectric transduction including a resonator vibrating beam of single crystal silicon (SCS) formed from layer 206/306 (Figs. 2/3). Fig. 3 shows the electrodes formed on the beam with a piezoelectric insulating layer 308 therebetween (see col. 6, lines 15-26) such that the electrodes and the beam resonate in an in-plane longitudinal mode (col. 6, lines 23-33).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA SUMMONS whose telephone number is (571)272-1771. The examiner can normally be reached on M-Th, M-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (571) 271-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bs
April 23, 2008

/Barbara Summons/
Primary Examiner, Art Unit 2817